Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Original) A magnetic read/write head having a protective coating comprising:

a highly tetrahedral amorphous carbon.

2. (Original) A magnetic recording media for use with a read/write head, the media comprising:

a substrate;

a magnetic layer disposed over the substrate; and

a protective layer over the magnetic layer, the protective layer comprising a highly tetrahedral amorphous carbon;

wherein the protective layer has a thickness of less than about 50 Å and a hardness of over about 80 GPa;

wherein the protective coating is adapted for use during continuous contact of the media with the read/write head; and

wherein the media has an areal density of over 1 gigabyte per square inch.

3. (Original) A method for depositing a protective coating comprising a continuous highly tetrahedral amorphous carbon on a substrate, the method comprising:

ionizing a source material so as to form a plasma containing ions which comprise carbon; and

energizing the ions to form a stream from the plasma toward the substrate so that carbon from the ions is deposited on the substrate, wherein the ions impact with an energy which promotes formation of sp^3 carbon-carbon bonds.

4. (Original) A method as in claim 3, wherein the carbon is deposited on the substrate at a rate higher than about 10 Å per second.

5. (Original) A method as in claim 3, wherein the source material comprises acetylene.

6. (Original) A method as in claim 3, wherein the substrate comprises at least one of magnetic recording media, glass, optics, machine tools, and integrated circuits.

7. (New) A method for enhancing an ion beam, the ion beam produced by inductively ionizing a plasma within a plasma volume and capacitatively coupling the plasma so as to form a stream of ions from within the plasma volume, the method comprising:

moving a magnetic field through the plasma volume to promote even resonant inductive ionization and homogenize the ion beam.

8. (New) A method as claimed in claim 7, wherein moving the magnetic field comprises selectively energizing magnetic coils disposed about the plasma volume.

9. (New) A method as claimed in claim 7, wherein the magnetic field rotates through the plasma volume with a frequency which is much less than the frequency of an alternating induction potential.

10. (New) A method as claimed in claim 7, wherein the magnetic field is transverse and rotates about an axis which is substantially normal to a capacitatively coupled extraction grid.

11. (New) A method as claimed in claim 7, wherein the magnetic field rotates with a frequency of less than 10,000 Hz.

12. (New) An inductive ionization resonance system for use with an ion-beam source including an antenna disposed about a plasma volume for inductively ionizing a plasma therein, a coupling electrode exposed to the plasma volume, and an extraction electrode

disposed over an opening of the plasma volume so that the extraction electrode is capable of extracting a stream of ions of the plasma therethrough by capacitive coupling, the system comprising at least one coil disposed adjacent the plasma volume, the at least one coil capable of moving a transverse magnetic field through the plasma volume to homogenize the stream of ions.

13. (New) A system as claimed in claim 12, further comprising a plurality of coils disposed about the container so that the magnetic field can be moved within the plasma volume by selectively energizing one or more coils.

14. (New) A system as claimed in claim 13, wherein the plurality of coils are radially disposed about the axis.

15. (New) A system as claimed in claim 12, wherein the plasma volume substantially defines a length and a diameter, wherein the opening is disposed at one end of the length, and wherein the length is between about one third the diameter and three times the diameter.